

Claims

1. Quick-action cylinder with safety device, comprising a mechanical lock for a center draw-in nipple (2) in a center bore (23) in a housing, wherein in the locked position one or more locking members (3) are urged into contact with an exterior periphery of the draw-in nipple by a force of a spring assembly which is arranged in the housing in one or several spring compartments (13) and wherein the unlocked position of the draw-in nipple (2) is achieved by applying pressure to a locking piston (7) which operates to oppose the force of the spring assembly, wherein at least one relief bore (15, 25, 26) which extends to a clearance space having a lower pressure is arranged in the spring compartment (13), **characterized in that** a valve member or a pressure element (16, 21, 24, 27) is arranged in the region of the relief bore (15, 25, 26) and moved into an open position in the event of an overpressure in the spring compartment (13).
2. Safety device according to claim 1, **characterized in that** at least one bore extends from the spring compartment (13) to a clearance space, with at least one deformable pressure member (16, 21) arranged in the clearance space.
3. Quick-action cylinder according to claim 2, **characterized in that** the deformable valve body is implemented as a control ring which deforms under the influence of a corresponding pressure medium and opens a relief bore as a result of the deformation.
4. Quick-action cylinder according to claim 3, **characterized in that** the relief bore extends to the center bore of the quick-action cylinder.
5. Quick-action cylinder according to one of the claims 1 to 4, **characterized in that** the deformable valve member consists of a pressure plug which is inserted through friction engagement in the relief bore in a relief direction of the hydraulic fluid.
6. Quick-action cylinder according to one of the claims 1 to 5, **characterized in that** a diaphragm valve closes along its periphery one or several relief bores, with the membrane of the diaphragm valve being deformable under the effect of the pressure medium and opening the

relief bore into the clearance space.

7. Quick-action cylinder according to one of the claims 1 to 6, **characterized in that** one or more spring-biased valves (check valves) are arranged in the relief bore, wherein in the closed position a valve body is pressed against the force of a control spring against a control surface and the valve body is connected for fluid conduction with the relief bore.